

STEREO INTEGRATED AMPLIFIER

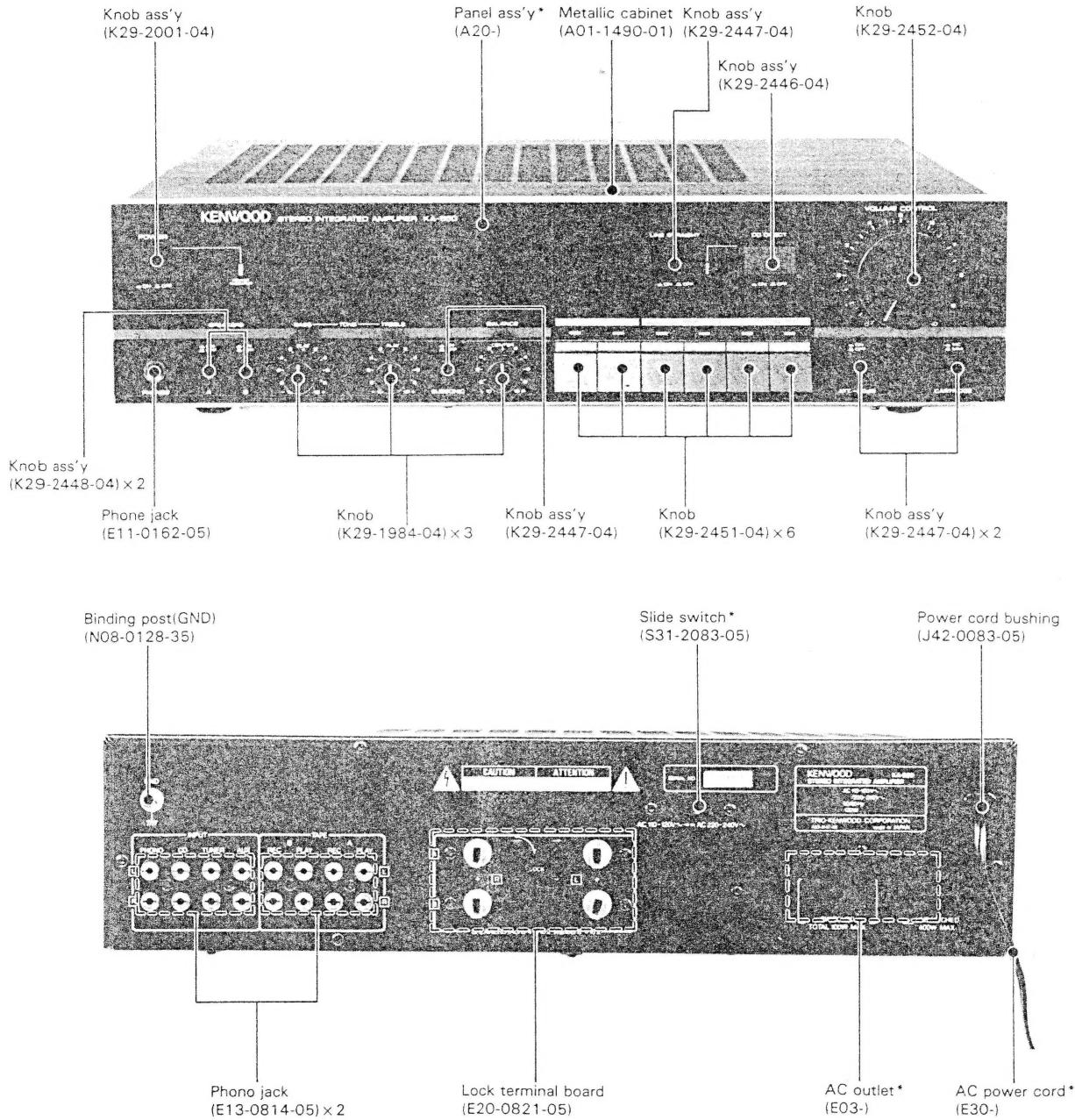
KA-550

SERVICE MANUAL

KENWOOD

TRIO-KENWOOD CORPORATION

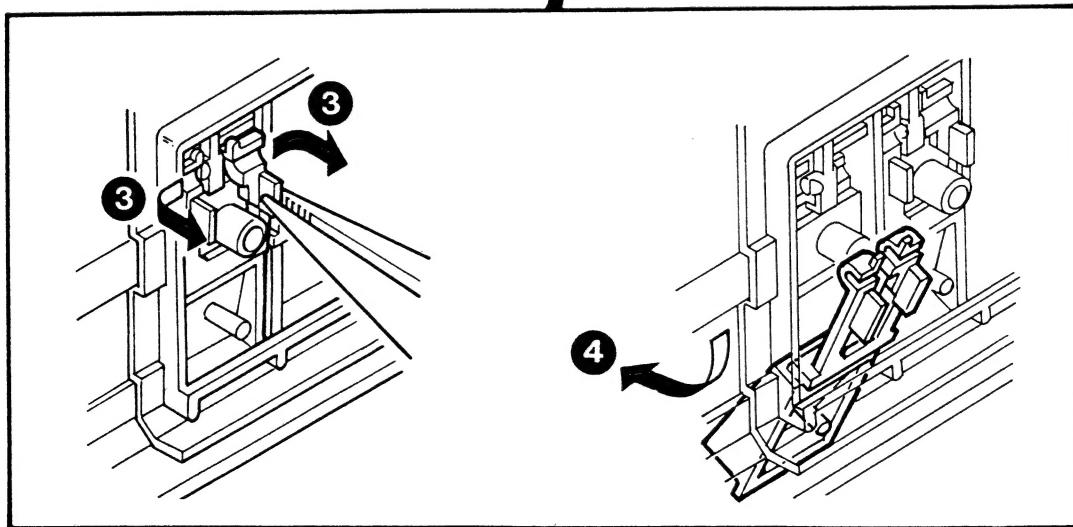
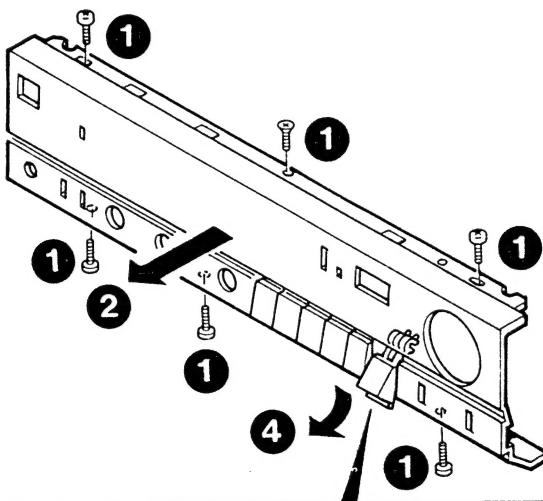
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*Refer to Parts List on page 6.

DISASSEMBLY FOR REPAIR

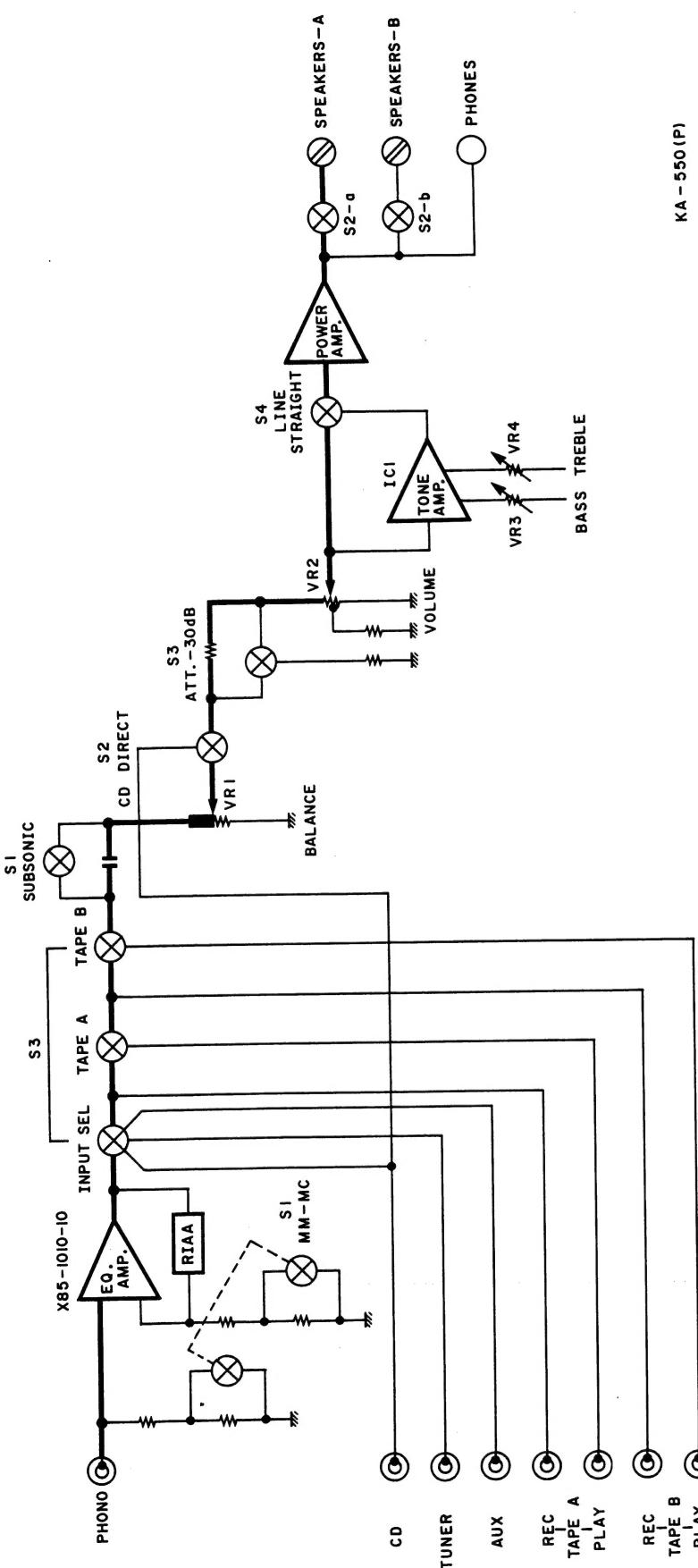
1. Remove the six screws mounted on the upper and lower section of the front panel.
2. Remove the front panel from the main body.
3. Hold the lug protruded from the back of the front panel with pliers, and remove the knob in the direction of the arrow.
4. Remove the knobs in the direction of an arrow.



KA-550 KA-550

BLOCK & LEVEL DIAGRAM

CIRCUIT DESCRIPTION



Component function
Audio unit (X09-2301-00)

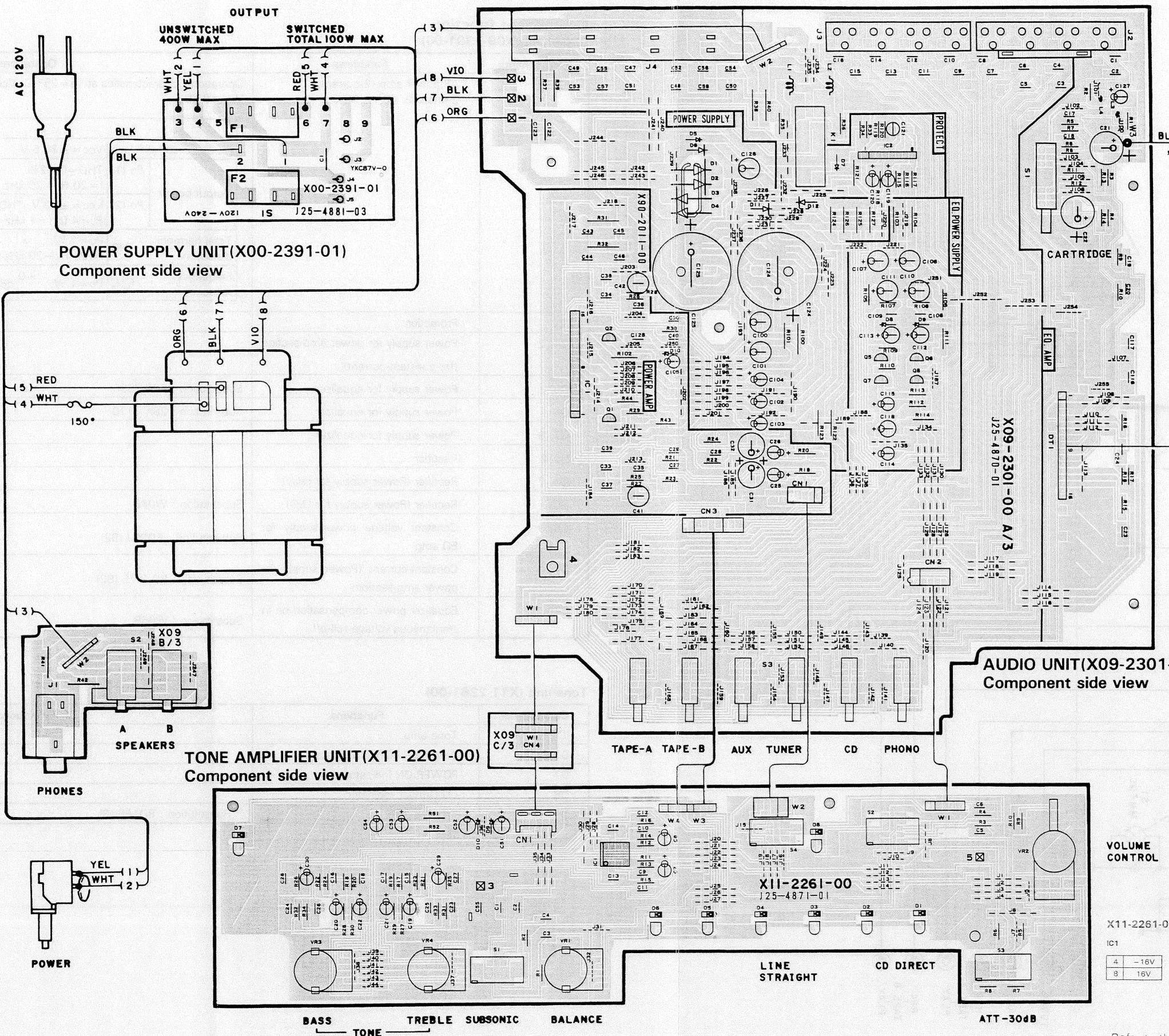
Components	Functions	Operations		
IC1	AF power amp (2-current, 2-channel. 40 W, Min) $V_o = 40 \text{ dB}$	Operational characteristics at $T_a = 25^\circ \text{C}$, $V_{cc} = \pm 32 \text{ V}$, $R_L = 8 \text{ ohms}$, $V_o = 40 \text{ dB}$		
		No-signal current I_{cco}	$V_{cc} = \pm 38.5 \text{ V}$	min typ max
		Output power	$P_o (1)$ $\text{THD} = 0.02\%$ $f = 20 \text{ Hz} \sim 20 \text{ kHz}$	40 — — (W)
			$P_o (2)$ $V_{cc} = \pm 29 \text{ V}$, $\text{THD} = 0.08\%$ $R_L = 4 \Omega$, $f = 1 \text{ kHz}$	45 — — (W)
		Total harmonic distortion	THD	$P_o = 1 \text{ W}$ $f = 20 \text{ Hz} \sim 20 \text{ kHz}$
		Frequency response	f_L, f_H	$P_o = 1 \text{ W}$, $\text{Po} = 1 \text{ W}$, $+0 \text{ dB}$ -3 dB
				10 ~ 100 K(Hz)
IC2	Protection			
Q1, 2	Power supply for power amp section (for constant-current)			
Q5	Power supply for equalizer	Substitution : 2SC 2590		
Q6	Power supply for equalizer	Substitution : 2SA 1110		
Q7, 8	Power supply for equalizer			
D1-4	Rectifier			
D5, 7	Rectifier (Power supply for relay)			
D6	Rectifier (Power supply for LED)	Substitution : W06B		
D8, 9	Constant voltage power-supply for EQ amp	Substitution : RD20J (B2)		
D10	Constant-current (Power supply for power amp section)	Substitution : RD 2.7E (B2)		
D11, 12	Equalizer power compensation on in stantaneous voltage roll-off	Substitution : W06B		

Tone unit (X11-2261-00)

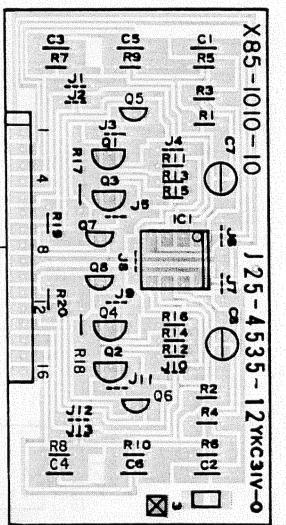
Components	Functions	Operations		
IC1	Tone amp			
D1-6	INPUT SELECTOR indicators			
D7	POWER ON indicator			
D8	CD DIRECT indicator			
D9, 10	Tone power	Substitution : RD16E (B)		

KA-550 KA-550

PC BOARD



X09-2301-00	Q1, 2	Q3
	E -	E -
	C -1.3V	C -
	B -36.4V	B 3.6V
	Q5	IC1
	E 19.0V	4 -1.3V
	C 31.9V	7 -39.4V
	B 19.6V	9 39.1V
	Q6	10 36.7V
	E -19.3V	11 -39.4V
	C -32.1V	IC2
	B -19.8V	2 0V
	Q7	3 0V
	E 19.0V	4 13.7V
	C -	5 0V
	B 18.3V	6 0.8V



X85-1010-10	IC1
	1 0V
	2 3.8V
	3 3.8V
	4 -19.3V
	8 19V

Q5, 7
G 0V
S 3.8V
D -

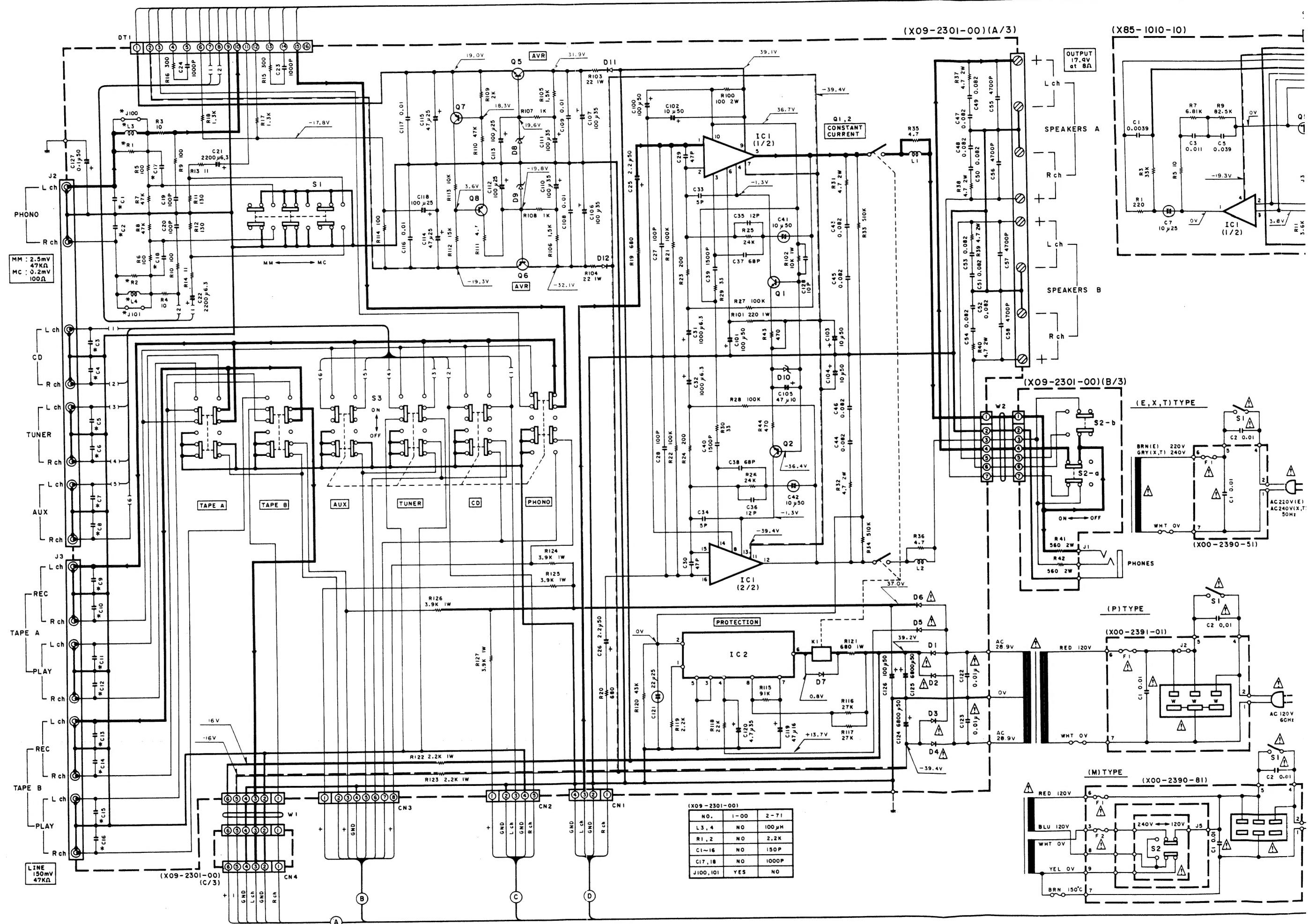
**AUDIO UNIT (X09-2301-00)
Component side view**

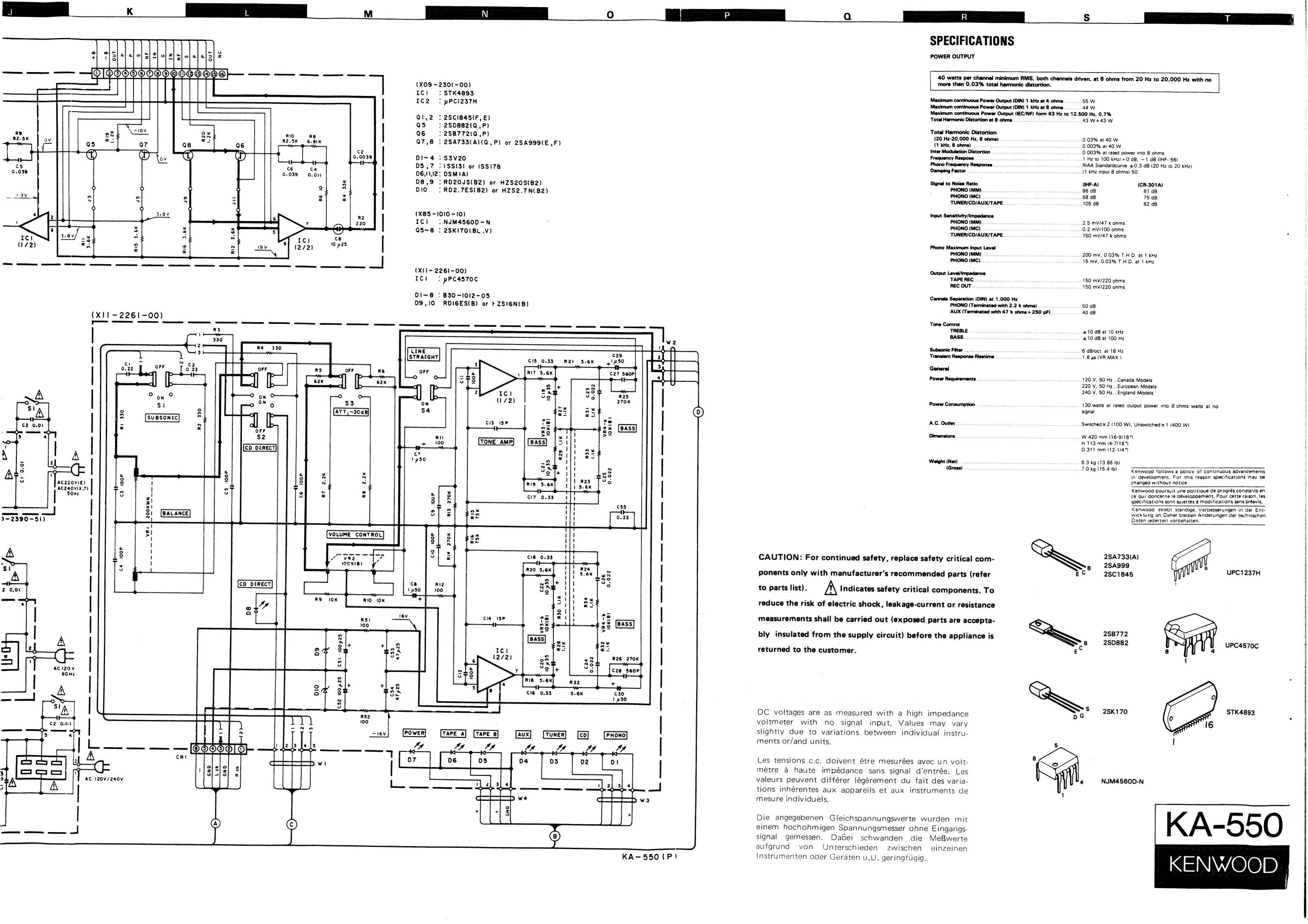
VOLUME CONTROL
X11-2261-00
IC1

4 -16V
8 16V

KA-550 (P)

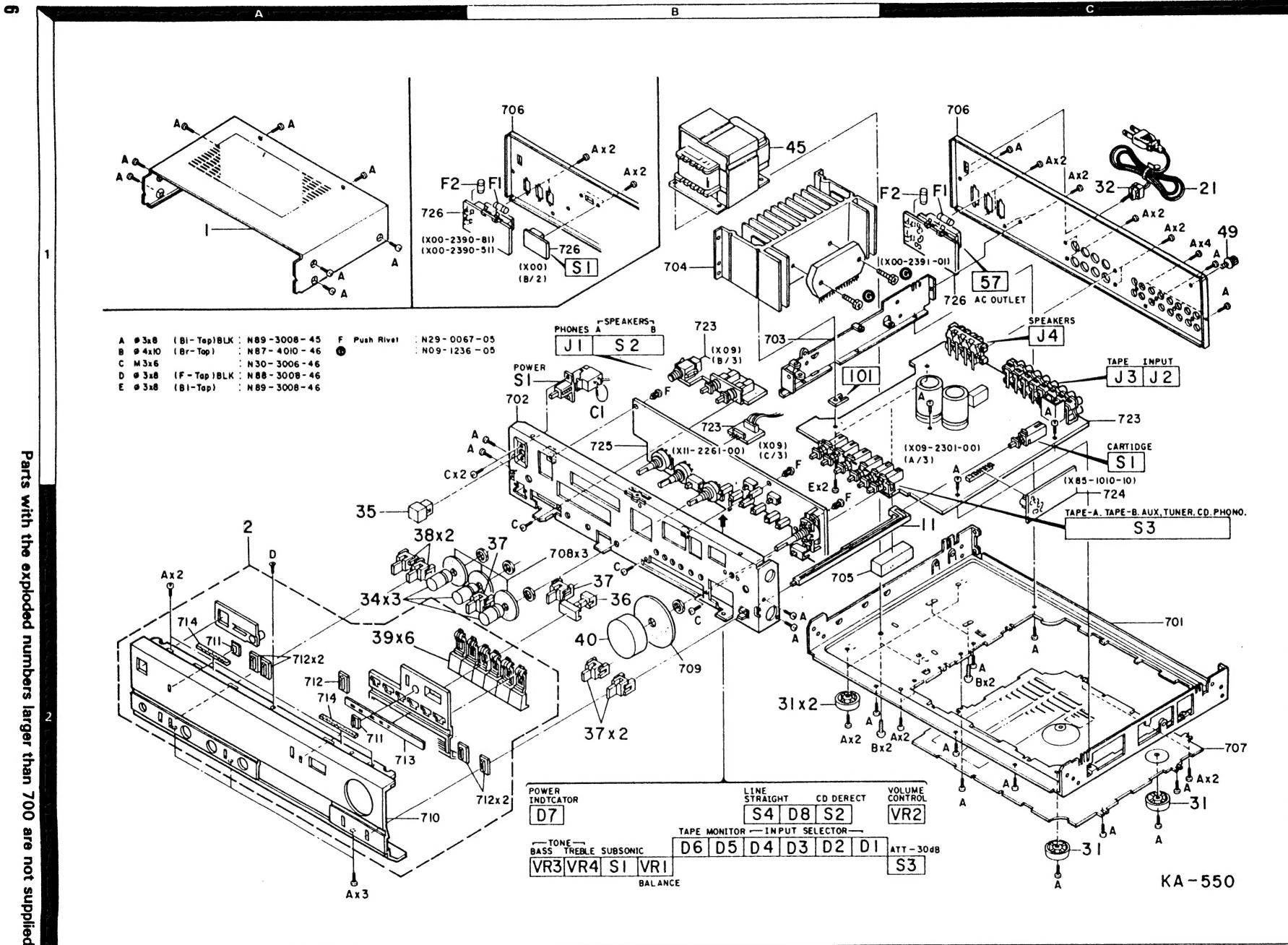
Refer to the schematic diagram for the values of resistors and capacitors.





EXPLODED VIEW

KA-550



PARTS LIST

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Telle ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位 置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
KA-550						
1	1A	*	A01-1490-01	METALLIC CABINET		
2	2A	*	A20-4896-03	PANEL ASSY	T	EPMX
2	2A	*	A20-4910-03	PANEL ASSY		
-			B46-0096-13	WARRANTY CARD	X	
-			B46-0121-03	WARRANTY CARD	P	
-			B46-0122-13	WARRANTY CARD	E	
-			B46-0123-03	WARRANTY CARD	T	
-		*	B50-6213-00	INSTRUCTION MANUAL(ENGLISH)	T	
-		*	B50-6214-00	INSTRUCTION MANUAL(FRENCH)	EPMX	
-		*	B50-6215-00	INSTRUCTION MANUAL(D,G,I)	E	
-		*	B50-6216-00	INSTRUCTION MANUAL(SPANISH)	M	
-		*	B50-6217-00	INSTRUCTION MANUAL(ENGLISH)	EPMX	
-			B58-0245-33	CAUTION CARD (FTZ)	E	
△ C2	1B		C91-0023-05	CERAMIC 0.01UF AC250V	M	
△ C2	1B		C91-0647-05	CERAMIC 0.01UF P	EPXT	
11	2C		D21-1104-03	EXTENSION SHAFT(MM/MC)		
△ 21	1C		E30-0459-05	AC POWER CORD	E	
△ 21	1C		E30-0812-05	AC POWER CORD	M	
△ 21	1C		E30-0974-05	AC POWER CORD	P	
△ 21	1C		E30-1341-05	AC POWER CORD	X	
△ 21	1C		E30-1416-05	AC POWER CORD	T	
△ F1	1C		F05-1623-05	FUSE (SEMKO) (250V T1.6A)	EXT	
△ F1	1C		F06-3023-05	FUSE (UL) (250V 3A)	P	
△ F1 ,2	1C		F05-1521-05	FUSE (250V 1.5A)	M	
-		*	H01-7188-04	ITEM CARTON CASE	EPMX	
-		*	H01-7189-04	ITEM CARTON CASE	T	
-		*	H10-1898-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-1899-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0225-04	PROTECTION BAG (850X450)		
-			H25-0232-04	PROTECTION BAG (235X350)		
△ 31	2B,2C		J02-0129-05	FOOT		
△ 32	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
34	2A		K29-1984-04	KNOB		
35	2A		K29-2001-04	KNOB ASSY (POWER)		
36	2B	*	K29-2446-04	KNOB ASSY (CD DIRECT)		
37	2B	*	K29-2447-04	KNOB ASSY (SUB,ATT,CART,LINE)		
38	2A	*	K29-2448-04	KNOB ASSY (SPEAKER)		
39	2A		K29-2451-04	KNOB (MONITOR, INPUT SELECTOR)		
40	2B	*	K29-2452-04	KNOB (VOLUME)		
45	1B	*	L01-7181-05	POWER TRANSFORMER	P	
45	1B	*	L01-7182-05	POWER TRANSFORMER	E	
45	1B	*	L01-7185-05	POWER TRANSFORMER	M	
45	1B	*	L01-7187-05	POWER TRANSFORMER	XT	
49	1C		N08-0128-35	BINDING POST (GND)		
F	1B,2B		N29-0067-05	PUSH RIVET (3.5X4.5)		
△ S1	1B		S40-1073-05	PUSH SWITCH		

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POWER SUPPLY(X00-2391-01)									
C1 C1			C91-0023-05 C91-0647-05	CERAMIC CERAMIC	0.01UF 0.01UF	AC250V P		M EPXT	
S7 S7	1C 1C	*	E03-0077-05 E03-0078-05	AC OUTLET AC OUTLET				M P	
- -			J13-0041-05 J13-0054-05	FUSE CLIP FUSE CLIP				PM EXT	
S1	1B		S31-2083-05	SLIDE SWITCH (POWER TYPE)				M	
AUDIO UNIT(X09-2301-00)									
C1 -16 C17 ,18 C19 ,20 C21 ,22 C23 ,24			CC45FSL1H151J CK45FB1H102K CC45FSL1H101J CEO4KW0J222M CK45FB1H102K	CERAMIC CERAMIC CERAMIC ELECTR0 CERAMIC	150PF 1000PF 100PF 2200UF 1000PF	J K J 6.3WV K		E E	
C25 ,26 C27 ,28 C29 ,30 C31 ,32 C33 ,34			CEO4KW1H2R2M CC45FSL1H101J CC45FSL1H470J CEO4KW0J102M CC45FSL1H050C	ELECTR0 CERAMIC CERAMIC ELECTR0 CERAMIC	2.2UF 100PF 47PF 1000UF 5.0PF	50WV J J 6.3WV D			
C35 ,36 C37 ,38 C39 ,40 C41 ,42 C43 -54		*	CC45FSL1H120J CC45FSL1H680J CK45FB1H152K C90-1400-05 CF92FV1H823J	CERAMIC CERAMIC CERAMIC NP-ELEC MF	12PF 68PF 1500PF 10UF 0.082UF	J J K 50WV J			
C55 -58 C100,101 C102-104 C105 C106,107			CK45FF1H472Z CEO4KW1H101M CEO4KW1H100M CEO4KW1A470M CEO4KW1V101M	CERAMIC ELECTR0 ELECTR0 ELECTR0 ELECTR0	4700PF 100UF 10UF 47UF 100UF	Z 50WV 50WV 10WV 35WV			
C108,109 C110,111 C112,113 C114,115 C116,117			CF92FV1H103J CEO4KW1V101M CEO4KW1E101M CEO4KW1E470M CF92FV1H103J	MF ELECTR0 ELECTR0 ELECTR0 MF	0.010UF 100UF 100UF 47UF 0.010UF	J 35WV 25WV 25WV J			
C118 C119 C120 C121 C122,123			CEO4KW1E101M CEO4KW1C470M CEO4KW1V4R7M C90-1353-05 CK45FE2H103P	ELECTR0 ELECTR0 ELECTR0 NP-ELEC CERAMIC	100UF 47UF 4.7UF 10UF 0.010UF	25WV 16WV 35WV 25WV P			
C124,125 C126 C127 C128			C90-0366-05 CEO4KW1H101M CEO4KW1H0R1M CC45FSL1H100D	ELECTR0 ELECTR0 ELECTR0 CERAMIC	6800UF 100UF 0.1UF 10PF	50WV 50WV 50WV D			
101 J1 J2 ,3 J4	1B 1B 1C 1C		E23-0125-05 E11-0162-05 E13-0814-05 E20-0821-05	TERMINAL PHONE JACK (3P) PHONE JACK (8P) LOCK TERMINAL BOARD (8P)					
L1 ,2 L3 ,4			L39-0085-05 L40-1011-47	PHASE-COMPENSATION COIL SMALL FIXED INDUCTOR (100UH, K)				E	
G	1B,1C		N09-1236-05	TAPPING SCREW (3X16)					

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R31 ,32			RS14DB3D4R7JTE	FL-PR00F RS	4.7	J	2W				
R35 ,36			RD14AB2E4R7JTS	FL-PR00F RD	4.7	J	1/4W				
R37 -40			RS14DB3D4R7JTE	FL-PR00F RS	4.7	J	2W				
R41 ,42			RS14KB3D561JTE	FL-PR00F RS	560	J	2W				
R43 ,44			RD14AB2E471JTS	FL-PR00F RD	470	J	1/4W				
R100		*	RS14DB3D101JTE	FL-PR00F RS	100	J	2W				
R101		*	RS14DB3A221JTE	FL-PR00F RS	220	J	1W				
R102		*	RS14DB3A103JTE	FL-PR00F RS	10K	J	1W				
R103,104		*	RS14DB3A220JTE	FL-PR00F RS	22	J	1W				
R105,106		*	RD14AB2E152JTS	FL-PR00F RD	1.5K	J	1/4W				
R111			RD14AB2E4R7JTS	FL-PR00F RD	4.7	J	1/4W				
R114			RD14AB2E101JTS	FL-PR00F RD	100	J	1/4W				
R121		*	RS14DB3A681JTE	FL-PR00F RS	680	J	1W				
R122,123			RS14DB3A222JTE	FL-PR00F RS	2.2K	J	1W				
R124-127			RS14DB3A392JTE	FL-PR00F RS	3.9K	J	1W				
K1			S51-2078-05	MAGNETIC RELAY							
S1	1C		S40-6027-05	PUSH SWITCH (CARTRIDGE)							
S2	1B	*	S42-2141-05	MULTIPLE PUSH SWITCH (SP)							
S3	2C	*	S42-6018-05	MULTIPLE PUSH SWITCH (M&N)							
D1 -4			S3V20	DIODE							
D5			1SS131	DIODE							
D5			1SS178	DIODE							
D6			DSM1A1	DIODE							
D7			1SS131	DIODE							
D7			1SS178	DIODE							
D8 ,9		*	HZS20S(B2)	ZENER DIODE							
D8 ,9		*	RD20JS(B2)	ZENER DIODE							
D10		*	HZS2.7N(B2)	ZENER DIODE							
D10		*	RD2.7ES(B2)	ZENER DIODE							
D11 ,12			DSM1A1	DIODE							
IC1		*	STK4893	IC(2CH AF POWER AMP)							
IC2			UPC1237H	IC(PROTECTION)							
Q1 ,2			2SC1845(F,E)	TRANSISTOR							
Q5			2SD882(Q,P)	TRANSISTOR							
Q6			2SB772(Q,P)	TRANSISTOR							
Q7 ,8			2SA733(A)(Q,P)	TRANSISTOR							
Q7 ,8			2SA999(E,F)	TRANSISTOR							
TONE AMPLIFIER UNIT(X11-2261-00)											
D1 -8	2B		B30-1012-05	LED(SLP-981C-50)							
C1 ,2			CF92FV1H224J	MF	0.22UF	J					
C3 -6			CC45FSL1H101J	CERAMIC	100PF	J					
C7 ,8			CEO4KW1H010M	ELECTRO	1.0UF	50WV					
C9 -12			CC45FSL1H101J	CERAMIC	100PF	J					
C13 ,14			CC45FSL1H150J	CERAMIC	15PF	J					
C15 -18			CF92FV1H334J	MF	0.33UF	J					
C19 -22			CEO4KW1V100M	ELECTRO	10UF	35WV					
C23 -26			CF92FV1H223J	MF	0.022UF	J					
C27 ,28			CK45FB1H561K	CERAMIC	560PF	K					
C29 ,30			CEO4KW1H010M	ELECTRO	1.0UF	50WV					
C51 ,52			CEO4KW1E101M	ELECTRO	100UF	25WV					
C53 ,54			CEO4KW1E470M	ELECTRO	47UF	25WV					
C55			CF92FV1H224J	MF	0.22UF	J					
R51 ,52			RD14GB2E101JTS	FL-PR00F RD	100	J	1/4W				

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VR1	2B	*	R06-5153-05	POTENTIOMETER(200K BH)	BALANCE	
VR2	2C	*	R06-5152-05	POTENTIOMETER(100K B)	VOLUME	
VR3 ,4	2B	*	R06-3052-05	POTENTIOMETER(10K B)	TONE	
S1	2B		S40-2351-05	PUSH SWITCH	(SUBSONIC)	
S2	2B		S40-4074-05	PUSH SWITCH	(CD DIRECT)	
S3 ,4	2B,2C	*	S40-2351-05	PUSH SWITCH	(LINE, ATT)	
D9 ,10			HZS16N(B)	ZENER DIODE		
D9 ,10			RD16ES(B)	ZENER DIODE		
IC1			UPC4570C	IC(OP AMP X2)		
PREAMPLIFIER UNIT(X85-1010-10)						
C1 ,2			CF92FV1H392J	MF	3900PF	J
C3 ,4			CF92FV1H113J	MF	0.011UF	J
C5 ,6			CF92FV1H393J	MF	0.039UF	J
C7 ,8			CEO4HW1E100MEL	NP-ELEC	10UF	25WV
R7 ,8		*	RN14BK2C6811FTS	RN	6.81K	F 1/6W
R9 ,10		*	RN14BK2C8252FTS	RN	82.5K	F 1/6W
IC1			NJM4560D-N	IC(OP AMP X2)		
Q5 -8			2SK170(BL)	FET		
Q5 -8			2SK170(V)	FET		

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SPECIFICATIONS

POWER OUTPUT

40 watts per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.03% total harmonic distortion.

Maximum continuous Power Output (DIN) 1 kHz at 4 ohms 55 W
 Maximum continuous Power Output (DIN) 1 kHz at 8 ohms 44 W
 Maximum continuous Power Output (IEC/NF) from 63 Hz to 12.500 Hz, 0.7%
 Total Harmonic Distortion at 8 ohms 43 W + 43 W

Total Harmonic Distortion

(20 Hz-20,000 Hz, 8 ohms) 0.03% at 40 W
 (1 kHz, 8 ohms) 0.003% at 40 W
 Inter Modulation Distortion 0.003% at rated power into 8 ohms
 Frequency Response 1 Hz to 100 kHz + 0 dB, -1 dB (IHF-'66)
 Phono Frequency Response RIAA Standardcurve ± 0.3 dB (20 Hz to 20 kHz)
 Damping Factor (1 kHz input 8 ohms) 50

Signal to Noise Ratio	(IHF-A)	(CR-301A)
PHONO (MM)	86 dB	81 dB
PHONO (MC)	68 dB	75 dB
TUNER/CD/AUX/TAPE	105 dB	82 dB

Input Sensitivity/Impedance
 PHONO (MM) 2.5 mV/47 k ohms
 PHONO (MC) 0.2 mV/100 ohms
 TUNER/CD/AUX/TAPE 150 mV/47 k ohms

Phono Maximum Input Level
 PHONO (MM) 200 mV, 0.03% T.H.D. at 1 kHz
 PHONO (MC) 15 mV, 0.03% T.H.D. at 1 kHz

Output Level/Impedance
 TAPE REC 150 mV/220 ohms
 REC OUT 150 mV/220 ohms

Channels Separation (DIN) at 1,000 Hz
 PHONO (Terminated with 2.2 k ohms) 50 dB
 AUX (Terminated with 47 k ohms + 250 pF) 40 dB

Tone Control
 TREBLE ± 10 dB at 10 kHz
 BASS ± 10 dB at 100 Hz

Subsonic Filter 6 dB/oct. at 18 Hz
 Transient Response Risetime 1.8 μ s (VR MAX.)

General

Power Requirements 120 V, 60 Hz...Canada Models
 220 V, 50 Hz...European Models
 240 V, 50 Hz...England Models

Power Consumption 130 watts at rated output power into 8 ohms watts at no signal

A.C. Outlet Switched \times 2 (100 W), Unswitched \times 1 (400 W)

Dimensions W 420 mm (16-9/16")
 H 113 mm (4-7/16")
 D 311 mm (12-1/4")

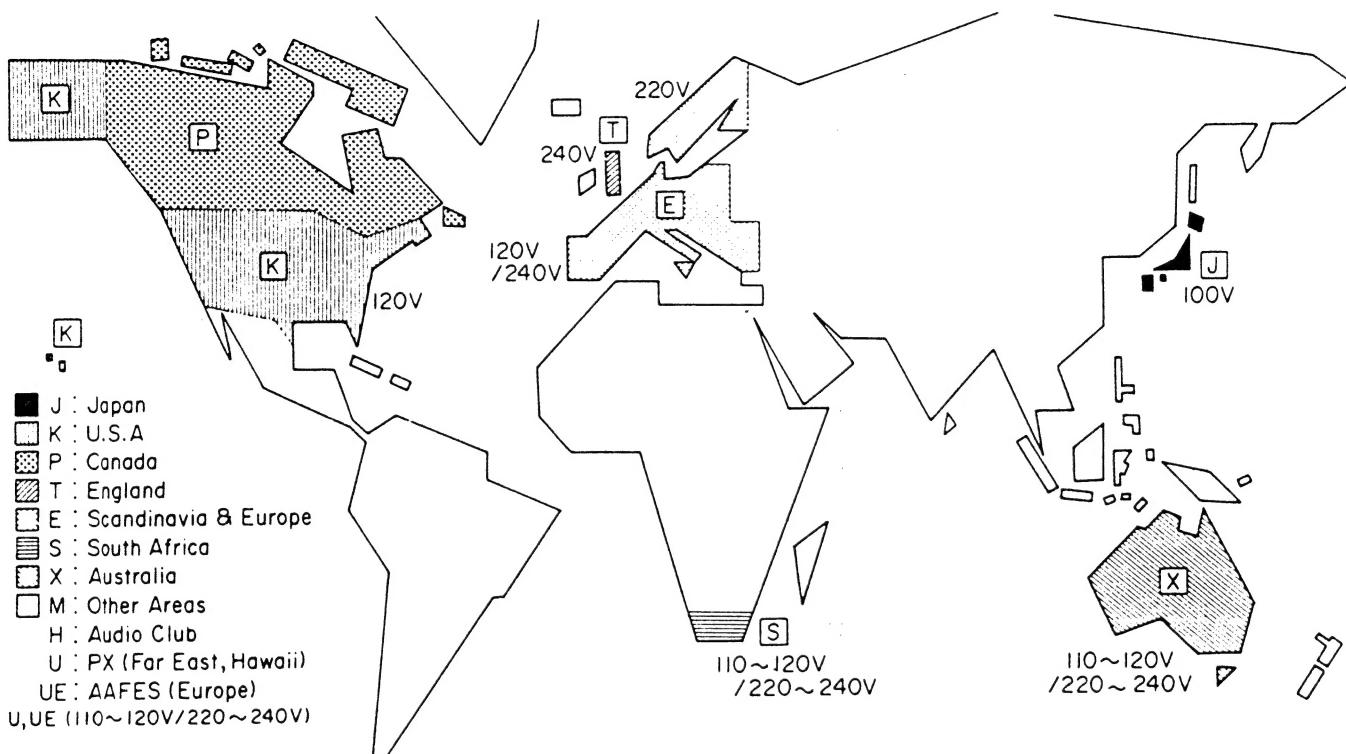
Weight (Net) 6.3 kg (13.86 lb)
 (Gross) 7.0 kg (15.4 lb)

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige, Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

WORLD MAP & AREA CODE



Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the CANADA (P) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

TRIO-KENWOOD CORPORATION

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KENWOOD ELECTRONICS

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